

In re Patent Application of:
GRIS
Serial No. 10/689,528
Filing Date: OCTOBER 20, 2003

REMARKS

Applicant would like to thank the Examiner for the thorough examination of the present application. Applicant would also like to thank the Examiner for correctly indicating as allowable the subject matter of dependent Claims 17, 19, 25, 27 and 29.

The independent claims have been amended to more clearly define the present invention over the cited prior art references. Claims 32-38 have been cancelled based upon the restriction requirement. The Applicant reserves the right to file a divisional application directed to the subject matter thereof. The arguments supporting patentability of the claims are presented in detail below.

I. The Claims Are Patentable

Independent Claims 15 and 24 were rejected over the Tsukada et al. patent. The present invention, as recited in amended independent Claim 15, for example, is directed to a process for doping a pattern of electrically isolated resistive elements comprising electrically charging selected elements of the pattern, doping the selected elements as a function of their charge after electrically charging the selected elements, and annealing the pattern. Independent Claim 15 has been amended to more clearly recite that the selected elements are doped after having been electrically charged.

Amended independent Claim 24 is similar amended independent Claim 15. Amended independent Claim 24 further recites forming an insulating layer on the silicon substrate, forming a silicon layer on the insulating layer, and forming a

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pattern of resistive elements in the silicon layer before electrically charging selected elements. However, amended independent Claim 24 does not recite an annealing the pattern.

The Tsukada et al. patent is directed to the fabrication of a polycrystalline silicon resistive layer as may be used in a high frequency bipolar transistor integrated circuit device. In particular, the Examiner has taken the position that the resistive layer being doped would be charged as a result of the doping process.

The Examiner has also taken the position that the claims in the present invention do not explicitly recite that the elements have to be charged before being doped. Independent Claim 15 has been amended to recite that the selected elements are doped after having been electrically charged. Amended independent Claim 15 recites "doping the selected elements as a function of their charge after electrically charging the selected elements."

Assuming that the Examiner is correct that the elements being doped in Tsukada et al. are being charged by the doping process, this is in sharp contrast to the claimed invention which recites "electrically charging selected elements" and then "doping the selected elements as a function of their charge after electrically charging the selected elements."

Tsukada et al. thus fails to teach or suggest a process for doping a pattern of electrically isolated resistive elements in which the selected elements of the pattern are electrically charged prior to being doped as a function of their charge. Instead, reference is directed to column 5, line 60 to column 6, line 2 in which the process in

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Tsukada et al. comprises:

"A polycrystalline silicon layer is deposited on an insulation layer covering a semiconductor substrate by using a chemical vapor deposition. The deposited polycrystalline silicon layer is subjected to a selective etching by using a photo resist as a mask. The remaining polycrystalline silicon layer is subjected to a selective doping by using ion-implantation with employing a photo resist pattern so as to introduce dopant into the remaining polycrystalline silicon layer except for a peripheral area having a predetermined width."

Accordingly, it is submitted that amended independent Claim 15 is patentable over the Tsukada et al. patent. Independent Claim 24 has been amended similar to amended independent Claim 15, and it is submitted that amended independent Claim 24 is also patentable over the Tsukada et al. patent. In view of the patentability of amended independent Claims 15 and 24, it is submitted that the dependent claims which recite yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

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CONCLUSION

In view of the claim amendments and the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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